UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,342	05/19/2000	Jouni Rapakko	460-009420-US(PAR)	9989

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EXAMINER
VU, TUAN A

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/575,342	RAPAKKO ET AL.
		Examiner	Art Unit
		Tuan A Vu	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 August 2004</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the Applicant's response filed 8/4/2004.

As indicated in Applicant's response, claims 1, 7, 15, 21, and 28 have been amended.

Claims 1-28 are pending in the office action.

Claim Objections

2.   Claim 1 is objected to because of the following informalities: the limitation 'wherein the

basic module receiving ... and the basic module loading ... interface module' (last 4 lines) is

written without a grammatically correct form of verb action for the limitation 'basis module'.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shih et al.,

USPN: 6,405,362 (hereinafter Shih), in view of Garney, USPN: 5,319,751 (hereinafter Garney).

As per claim 1, Shih discloses a method for loading the software application from an

expansion card in an electronic device (e.g. col. 3, lines 8-18), said method comprising loading,

starting and executing program modules in the device;

which expansion card can be coupled in a releasable manner to the device (Fig. 1; 3);

wherein executing the loading of the expansion card application is done in 2 phases (Fig.

2, 3);

wherein the first phase includes the loading and start-up of the basic module (e.g. *event monitor* , step 300 - Fig. 2; col. 6, lines 25-37); and

the second phase includes conducting the loading and start-up of the software application module (e.g. steps 315-320 – Fig. 3) when the expansion card is coupled to the electronic device (Fig. 3); and

wherein the basic module receives a signal about attaching the expansion card and loads the software application (Fig. 3).

But Shih does not explicitly disclose that the expansion card software application is user interface software. But Shih discloses software applications on hand held devices or user event-driven applications, each of them necessarily include user interface modules (e.g. col. 6, lines 5-32); hence has implicitly disclosed that the software application to be loaded is an user interface software.

Nor does Shih specify that said user interface software from the expansion card is divided in a basic module and a user interface module. The loading and activation of software from removable media being divided into a basic operating system level module and a main software module was a known concept in the art of computer booting and loading of operating system components or upgradable software. And this has been applied to software provided via removable device being coupled to host computer system targeted for the purpose to load up thereto such additional software or O.S. components. Garney, in a method to activate/configure a processing device with software loaded from the removable resources being attached thereon analogous to the expansion card loading by Shih, teaches the software loading being done in 2 parts, the first part being a stub for setting basic operating system configuration for preparing the

host machine to incorporate the second part on the software which is loading and activation the content of the software in the removable card (Fig. 6-12). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to provide a software loading method as suggested by Shih with a 2 parts just as taught by Garney just so to prepare the host target system with first software basic (Garney's stub) component to incorporate a second and main component of the software for which more resources are required and yet assure secure control and operation of the incorporation of this main software component in that less resources would be used to forestall conflicts by which more resources could be otherwise jeopardized.

As per claim 2, Shih further teaches a method wherein the first basic module controls the execution of the second phase (step 315 – Fig. 3).

As per claim 3, Shih further teaches application programming interface and device driver to arrange communication between user interface software and expansion card (Fig. 3 – Note: O.S. device driver recognition cooperating with shell or windows API for signaling an hardware insertion is implicitly disclosed); said basic module being signaled on the coupling of the expansion card from device driver for effecting the loading and start-up of the software user interface module (e.g. col. 6, line 20 to col. 8, line 32).

As per claim 4, Shih does disclose wherein coupling an expansion card to a electronic device an interrupt signal is produced with OS examination of cause therefor; and information on the coupling is transmitted to a device driver (e.g. col 7, lines 30-50 – Note: Shell notifying a event monitor to allocate immediate resource for handling a signal is equivalent to interrupt signal handler for addressing hot insertion of card).

As per claim 5, Shih discloses wherein the decoupling of an expansion card halts processing of a user interface module without interrupting the basic module (Fig. 2,3 – Note: event monitor is required to remain functional even if card is removed for signal removal event).

As per claim 6, Shih discloses that memory is allocated for a user interface module when said module is loaded and said memory is deallocated when an expansion card removed from an electronic device (e.g. col. 7, lines 19-23, 62-67)

As per claim 7, Shih discloses a electronic device comprising means for loading a application software in an electronic device, means for coupling an expansion card in a releasable manner in electronic device; and means for loading, starting and executing program modules in the device (Fig. 2,3); and the loading of the application being arranged to be executed when the expansion card is coupled to the device; wherein a basic module receives a signal about attaching the expansion card and loads the software application (Fig. 3).

But Shih does not explicitly disclose that the application software is a user interface software; but this limitation has been addressed in claim 1 above.

Nor does Shih disclose that the user interface software is divided in a basic module and a user interface module; but this limitation has been addressed in claim 1 above using Garney.

As per claims 8-9, these are the apparatus claims corresponding to the method of claims 2-3, respectively. The claims are rejected under the same arguments as cited above, with Column 2, Line 1 referencing the apparatus (information process apparatus).

As per claims 10-11, these claims represent an apparatus performing a method corresponding to the method of claims 3 and 4, hence are rejected using the same arguments as cited above in the respective claims (Fig. 3 – Note: O.S. device driver recognition cooperating

with shell or windows API for signaling an hardware insertion is implicitly disclosed; col. 6, line

20 to col. 8, line 32; col 7, lines 30-50).

   As per claim 12, Shih discloses communications with bus and multi-machine

environment (Fig. 1); and Garney teaches that the expansion card comprises a

transmitter/receiver unit and power amplifier (e.g. *device driver* - col.1, li.60 to col.2, li.4). At

the time of the invention, it was a well-known concept to one of ordinary skill in the art that a

power amplifier is commonly used in the output stage of a signal-producing device to isolate

output impedance. Additionally, it was also well-known in the art that a driver acts as

transmitter/receiver unit to control components of a specific computer resource, and that card

like modem or game adapter card come with a speaker being amplified by a power amplifier.

Hence if Garney (in combination with Shih) does not already provide a high frequency power

amplifier at the output stage of the transmitting unit, it would have been obvious to a person of

ordinary skill in the art to modify Garney's expansion card so that it does come with one such

amplifier to generate audio or signal with frequencies capable of being amplified for securing

distance transmission of signal or impedance matching purposes.

   As per claim 13, Shih further teaches an apparatus for performing the method of claim 1

wherein the electronic device is a data processor (e.g. col. 6, lines 5-32).

   As per claim 14, Shih further teaches an storing means for performing the method of

claim 1 (e.g. *memory* - col.2, li.2; Fig. 12); all whose limitations having been addressed above.

   As per claim 15, Shih discloses a method for loading the application software of an

expansion card in an electronic device, said method comprising loading, starting and executing

program modules in the device;

which expansion card can be coupled in a releasable manner to the device (Fig. 1; 3);

executing the loading of the expansion card application software is done in 2 phases (Fig. 2, 3);

wherein the first phase includes the loading and start-up of the basic module (e.g. *event monitor,* step 300 - Fig. 2; col. 6, lines 25-37); and

the second phase includes conducting the loading and start-up of the software application module (e.g. steps 315-320 – Fig. 3) when the expansion card is coupled to the electronic device (Fig. 3).

Shih does not explicitly disclose optionally stopping between the first phase and the second phase, but this is implicitly disclosed because (see Fig. 3) any time the user chooses to stop the event monitor at stage 300, the user can effect an manual interruption and enable the stop between the 2 phases, i.e. alternative by user to stop the installation before it starts reads on optionally stopping.

Shih does not explicitly disclose that the software application is an user interface software; nor does Shih specify that said user interface software is divided in a basic module and a user interface module. But these limitations have been addressed in claim 1 above.

As per claims 16-20, refer to respective rejections of claims 2-6.

As per claim 21, this corresponds to claim 7, hence is rejected using the corresponding rejections as set forth therein; and further recites means capable of stopping the loading between the loading of the basic module and user interface module. This limitation has been addressed in claim 15 above.

As per claims 22-27, refer to respective rejections of claims 8-13.

As per claim 28, this is a storing means version of claim 15, hence is rejected using the

corresponding rejections as set forth therein, the storing means being inherent in a processing

unit like the computing system as taught by Shih.

Response to Arguments

5.   Applicant's arguments filed 8/4/2004 have been fully considered but they are not

persuasive. Following are the Examiner's observation in regard thereto.

(A)   Applicants have submitted that Shih, 'during installation, first the insertion of the card

causes an event. Then the first program (autorun) is loaded … different phases are: triggering

event – execution of autorun … installation…autorun program' (Appl. Rmrks, pg. 12, 2nd para).

The rejection has pointed out what section in Shih's reference reads on the first phase of

executing the loading of the expansion card application software into the target computer; and

what reads on the second phase. Looking at Fig. 2 of Shih, it can be recognized that a software

has been loaded into the computer OS memory in order to await for an event, i.e. *conducting the*

loading and start-up of the basic module, which is to be called the first phase. Then, from Shih's

Fig. 3, also recognized is that the detection of the card insertion event triggers what is recited as

the second phase, during which the loading and start-up of the expansion card application

software is executed. The auto-run feature is inherent to the second phase; but that does not

constitute a major counterpoint as to why what is conveyed through steps 315-320 of Fig. 3 fail

to read on what is recited as 'the second phase includes conducting the loading and start-up of

the … module'; and what Shih is performing via those steps read on what is claimed. Besides, as

recited, the claim does not necessarily preclude that any auto-run feature present in this phase

would render impossible the fact that this phase is one single loading and start-up phase. In other

words, the assertions by Applicants that Shih by providing a triggering event, an autorun, and an

installation, does not disclose 2 phases is not justified based on Examiner's above analysis. In

order for the claim features to distinguish over the prior art, the features have to be recited in

such specificity to overcome Examiner's broadest reasonable interpretation, which is exactly

how the rationale of the rejection has been based upon.

(B)   Applicants have submitted that Garney 'teaches that the insertion of the card functions ...

one-phase event ... in other words the steps are: triggering event – loading ... execution of the

device driver ... using the stub code' (Appl. Rmrks, pg. 12, 3rd para). It is noted that the

rationale using Garney with Shih is not intended to fulfill the 2 phases of loading and activating

the expansion card software as required by Applicants' allegations. The combination is mainly

purported to address the limitation that expansion card software can be divided into a basic

module and a UI application module; and the rationale has shown exactly the motivation for

Shih's 2 phases to additionally provide the structuring of the expansion card software into a main

software application and an initial software module (or initialization *stub* as taught by Garney) so

that the main part of the application can be installed under the regulative execution of such initial

module which has been loaded as in the first phase. The rationale in the rejection is specifically

addressing the limitation of partitioning the expansion card content into an initial module and a

main module; not trying to meet the requirement of the 2 phases of load and start-up; these

limitations believed to have been met by Shih as explained in section A above. Applicants fail to

show specifics as to why the combination as set forth would generate adverse effects or would

not generate a good chance of success. Hence, Applicants' arguments about a one-phase step

teaching by Garney turn out misdirected or out of line with regard to pointing out the impropriety

of the grounds of the rejection as set forth; and amount to mere allegations for failing to indicate

how the claimed feature distinguishes over the prior art.

(C)   Applicants have submitted that Garney does not have 'actual second phase loading in the

sense of the current invention' and that as combined, Garney and Shih 'would merely teach a

person skilled in the art ... to load an autorun ... to drive an application ... from the same

memory card not loading the application program to the computer memory' (Appl. Rmrks, pg.

13, 2nd and 3rd para). As pointed out from above, Shih has been perceived as providing the

phases of executing and start-up of 1) the basic module which monitor an insertion event and 2)

the main application software from the expansion card. Garney is only brought in to provide the

partitioning of the expansion card software into a initial phase module and a main application

module, which are loaded at two different stages of Garney's process. This also signifies that the

missing feature in Shih is not the 2 phases limitation but the dividing of the expansion card

software content in 2 loadable portions; and by combining Garney and Shih, this limitation

would have been obvious for the reasons provided in the rejection. Hence, most of Applicants

points raised herein amount to reiterating what has been seen as misdirected as mentioned in

sections A and B above, i.e. those are not persuasive because Applicants apparently discount the

way the rationale has being applied thus fail to point out in what specific ways the above

combination would be inappropriate.

Thus, the rejection will stand rejected as set forth.

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The

examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki can be reached on (571)272-3719.

The fax phone number for the organization where this application or proceeding is

assigned is (571) 273-3735 (for non-official correspondence – please consult Examiner before

using) or 703-872-9306 (for official correspondence) or redirected to customer service at 571-
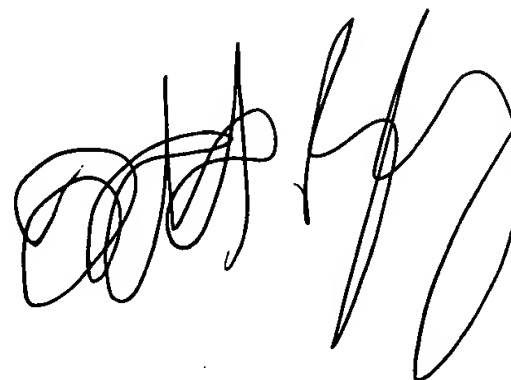
272-3609.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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VAT
December 2, 2004

TODD INGBERG
PRIMARY EXAMINER